ANNUAL REPORT

of the

DAIRY DIVISION

and

ALBERTA DAIRY CONTROL BOARD

for the Year

1983 – 1984

Alberta
AGRICULTURE

86-06297/

ANNUAL REPORT

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FOR THE FISCAL YEAR

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REPORT OF THE DAIRY DIVISION

Headquarters Staff

DIRECTOR F. R. Hutchings, B.S.A., P.Ag.
(Retired March 11, 1984)
ADMINISTRATIVE ASSISTANT B. M. MacIntyre, B.Ed.

HEAD, DAIRY CATTLE IMPROVEMENT BRANCH A. A. Hughes, B.Sc., P.Ag.
ASSISTANT HEAD, DAIRY CATTLE IMPROVEMENT BRANCH
B. J. Rhiness, B.Sc.(Agr.), P.Ag.

HEAD, DAIRY FARM INSPECTION BRANCH L. G. Johnston, B.S.A., M.B.A.

HEAD, DAIRY PROCESSING BRANCH K. J. Waldon, B.S.A.

HEAD, DAIRY FARM PRODUCTION BRANCH E. S. Bristow, B.Sc., P.Ag.

PROVINCIAL CHEESE SPECIALIST R. J. Lowrie, B.Sc., M.Sc., Ph.D.

Specialists

AIRDRIE

E. Skovmose, B.Sc.
J. S. Adams, B.Sc.
A. W. Visscher, B.Sc.
D. G. Lowry, B.Sc., M.A.

BARRHEAD

J. Eisen, B.Sc.

EDMONTON

T. S. Sohal, B.S.A.
R. C. Pilling, B.Sc.
(Appointed September 7, 1983)

FAIRVIEW

R. G. Nevills, A.A.S., B.S.A.
(Resigned May 31, 1983)
R. J. Pulyk, B.Sc.
(Commenced September 9, 1983)

LETHBRIDGE

W. D. Collis, B.S.A.
T. J. Dow, B.Sc.

RED DEER

R. L. Hunter, B.S.A.
B. J. Cameron, B.Sc.
(Appointed March 1, 1984)

VERMILION

R. M. Becker, B.Sc.

WETASKIWIN

R. C. Grapentine, B.Sc.

GENERAL REVIEW

Note: All statistics are for the fiscal year April 1, 1983 to March 31, 1984.

Total milk production in the fiscal year 1983-84, including farm separated cream expressed as milk equivalent was down 4.33%.

Milk used in Fluid Class I products (Homo, 2%, Skim, Chocolate, Buttermilk, Egg Nog and 10% Cream) was down 3.03% compared to 1982-83.

Milk available for manufacturing (excluding farm separated cream) decreased 3.08%.

Farm separated cream continued to decline at a rate near 21%.

The farm value of milk produced in 1983-84 was $246,721,000. The factory value of dairy products produced was $480,089,000. Estimated Federal Subsidy was $18,661,000. During the period Federal Subsidy remained at $6.03 per hectolitre; the within quota levy was $1.43 per kilogram August 2st, 1983 with no change to March 31, 1984; the over quota levy was $8.83 per kilogram; and the skim-off levy on Class I production remained at 30.15¢ per hectolitre.

The Alberta Dairymen's Association again increased their funding for dairy advertising in Alberta and through the Dairy Bureau.

Privatization of D.H.I. fild services was a priority of the Dairy Division in 1983. Assistance was provided to the Alberta Milk Producers' Association Ltd., ensuring an orderly transfer of staff and responsibilities from government to the Alberta Milk Recording Board.

EXTENSION ACTIVITIES

Extension activities included the areas of milk production, both finished product in plant and raw product in plant and on farm, and management advisory service. Monthly newsletters were compiled and directed to dairy processors and to dairy producers; information bulletins covering specific dairy topics were made available on request.

The Graduated Entry Program was introduced into Alberta in 1974 as part of the National Market Sharing Program. Graduated Entry provides an opportunity for qualifying industrial milk and cream producers to participate in the fluid milk market.

Dairy Division staff provide advice and direction to all dairymen who have applied for Graduated Entry, concerning improvement in milk quality and upgrading of dairy buildings and equipment.

While applications for Graduated Entry were received, no new applications were approved due to the decline in fluid sales.

Northern Alberta Dairy Pool had announced that all of its industrial milk shippers would have to meet fluid milk standards for barns and milking equipment by November 1, 1984. Central Alberta Dairy Pool introduced a program of financial assistance designed to encourage its industrial milk shippers to meet the same standards. Dairy Farm Inspection staff were active in advising those producers on the fluid requirements and in preparing recommendations for compliance.

Summary of Staff Changes

April 30, 1983	- Geoff May resigned.
May 31, 1983	- Robert Nevills resigned.
July 10, 1983	- Jack Goin retired.
July 18, 1983	- Isabel Teasdale appointed Dairy Farm Technician, Airdrie.
September 7, 1983	- Robert Pilling appointed Dairy Farm Specialist, Edmonton.
September 9, 1983	- Robert Pulyk appointed Regional Dairy Specialist, Grande Prairie.
October 31, 1983	- Verna Mumby resigned.
March 1, 1983	- Brian Cameron appointed Dairy Farm Specialist, Red Deer.
March 11, 1983	- Fred Hutchings retired.

At March 31, 1984 the Dairy Division had -

45 Permanent Positions
8 Temporary Salary Positions

STATISTICS

Farm value for milk and cream sold in Alberta:

Fluid Purposes	$ 120.8 Million
Industrial Purposes	97.8 Million
Cream	4.8 Million
Value of Milk & Cream Sold	$ 223.4 Million

Another $4.6 Million worth of milk and cream was used on farms. Alberta dairymen received approximately $19 Million in Federal Subsidy payments.

Total value of dairy products was approximately $480 Million.

Estimated value of selected products (expressed in Millions) for the 1983-1984 fiscal year:

Butter	$ 40.0
Cheddar Cheese	26.5
Cheese Other than Cheddar	21.8
Fluid Milk	182.2
Other Fluid Products	35.5
Ice Cream	48.5
Miscellaneous - Concentrated and Powdered Milk, Cottage Cheese, Yoghurt, etc.	96.3

TABLE I **Estimated Farm Value of Alberta Milk Production April 1983 - March 1984**

The quantity, price, value and utilization of milk production during April 1983 to March 1984 is reported in the following table. To indicate changes from the previous year, 1982/83 figures have been included.

	Year	Butterfat Production ' 000 kg	Milk Equivalent '000	% of Total	Prices $	Value $'000
Butterfat for Creamery Butter	1983/84	1,193	33,130 l.	5.92	4.101/kg	4,892
	1982/83	1,507	41,849 l.	7.15	3.933/kg	5,927
Milk Purchased for the Manufacture of Powder and Butter (1)	1983/84	4,365	121,248 l.	21.66	35.93/hl	43,564
	1982/83	4,494	124,846 l.	21.34	34.02/hl	42,473
Milk for Cheesemaking	1983/84		84,632 l.	15.12	35.99/hl	30,459
	1982/83		84,421 l.	14.43	34.05/hl	28,745
Milk for Concentrating and Milk & Butterfat for Ice Cream & Misc. Products (2)	1983/84		63,196 l.	11.29	37.69/hl	23,819
	1982/83		68,352 l.	11.68	35.81/hl	24,477
Milk Purchased for Fluid Purposes	1983/84		257,541 l.	46.01	46.94/hl	120,890
	1982/83		265,562 l.	45.40	45.38/hl	120,512
Kept on Farms, Skimmilk for Creamery Butter	1983/84	29,817			15.50/100kg	4,622
	1982/83	37,664			14.40/100kg	5,424
Estimated Federal Subsidy	1983/84					18,661
	1982/83					18,475
TOTAL	1983/84		559,747			246,721
	1982/83		585,030			246,219

(1) Includes milk used for the making of cottage cheese.

(2) Does not include butterfat from creamery butter used in the manufacture of ice cream

TABLE II Estimated Production and Value of Factory Dairy Products April 1983 - March 1984

The following table shows the quantity, price and value of dairy products manufactured or processed in Alberta dairy manufacturing plants during April 1983 to March 1984, with corresponding figures for 1982/83 added to provide a means for comparison.

	Year	Quantity ' 000	Price $	Value $ '000
Creamery Butter (kgs)	1983/84	7,800 kg	5.130/kg	40,014
	1982/83	8,475 kg	4.762/kg	40,358
Cheddar Cheese (kgs)	1983/84	4,160 kg	6.367/kg	26,487
	1982/83	4,023 kg	6.030/kg	24,259
Variety Cheese (kgs)	1983/84	3,533 kg	6.176/kg	21,820
	1982/83	3,651 kg	5.082/kg	18,554
Ice Cream (litres) (L)	1983/84	30,891 L	1.570/L	48,499
	1982/83	27,797 L	1.380/L	38,360
Fluid Milk Sales (litres)	1983/84	227,777 L	.800/L	182,222
	1982/83	236,303 L	.760/L	179,590
Fluid Cream Sales (litres)	1983/84	8,768 L	1.580/L	13,853
	1982/83	8,788 L	1.510/L	13,270
Fluid Skimmilk, Buttermilk and Chocolate Sales (litres)	1983/84	24,871 L	.870/L	21,638
	1982/83	24,690 L	.830/L	20,493
Skimmilk & Buttermilk in Factories	1983/84	10,448 kg.	2.800/kg	29,254
	1982/83	9,844 kg.	2.605/kg	25,644
Whey in Factories	1983/84	75,709 kg.	Nil	Nil
	1982/83	68,305 kg.	Nil	Nil
Miscellaneous Manufactured Products (2)	1983/84			96,302
	1982/83			88,657
TOTAL	1983/84			480,089
	1982/83			449,185

(1) Includes hard and soft ice cream.

(2) Includes concentrated milk products, cottage cheese, whey cheese and yoghurt.

DAIRY PROCESSING BRANCH

Overview

Neither fluid nor industrial milk processors had difficulty obtaining their raw milk requirements. Milk supply was similar to previous years but static fluid milk sales necessitated greater processing into manufactured dairy products. A combination of quota management by producers and climatic conditions prevented large volumes of milk being shipped for processing during the "flush" period thus avoiding excessive pressure on the somewhat obsolete milk drying facilities. Lower peak volumes of full utilization of cheesemaking capacity kept out-of-province milk processing to a minimum. However, the need for improved capability to process fluid milk surpluses was apparent once again. Market conditions may not allow for cheese to be used as the balance wheel in future years.

Renovation, modernization and expansion of cheese operations continued. A new factory commenced manufacture of process cheese slices in July. Two cheese cutting and packaging plants expanded to new premises.

Staffing of the branch was very stable. The only change was a new Regional Dairy Specialist in the Peace River Region.

Regulatory

Dairy Specialist activities in regulatory functions were:

	1982/83	1983/84
Dairy Plant Inspections	447	480
Farm Inspections	634	680
Cream Grades Checked	2,332	2,520
Cream Grades Adjusted	7	14
Cream Tests Checked	860	796
Cream Tests Adjusted	17	1
Bulk Tank Trucks & Drivers Inspected	316	331
Bulk Tanks Levelled	29	10

Plant inspection programs are carried out to ensure compliance of all Alberta dairy manufacturing facilities and their products with existing regulations. Most of the fluid milk processing plants are newly built or recently renovated. These plants continue to receive high scores upon inspection. A small number of antiquated, run-down plants severely depress the average score of all Alberta plants.

Bacteriological and compositional standards of fluid and manufactured dairy products remain very high, substantially higher than the regulatory minimum. The branch continued to concentrate on keeping quality as reflected by a stressed product test as the yardstick by which quality was measured. This more stringent test is necessary since products must remain fully acceptable to consumers after sometimes lengthy periods in the distribution system not always under ideal storage conditions. Dairy Specialists investigated isolated lapses in quality rather than chronic difficulties in producing satisfactory products.

Virtually all freshly processed milk met Health Standards. After subjection to stress conditions (7 days at 7°C), 64.46% were still within requirements of Board of Health regulations. The branch continues to work towards 100% compliance at both levels.

The Provincial Dairy Division continued to participate in the Federal In-Depth Inspection Program. Current position and comparative data for last year is as follows:

	1982/83	1983/84
National Average Plant Score	82.4	82.2
Alberta Average Plant Score	88.1	88.0
Lowest Scoring Plant in Alberta	77.1	72.7
Highest Scoring Plant in Alberta	99.9	99.4

Licensing

Licenses Issued	1982/83	1983/84
Milk & Cream Graders & Testers	101	110
Cream Graders	69	75
Plant Milk Graders	61	71
Bulk Tank Milk Graders	278	280
Dairy Manufacturing Plant	35	35

Margarine

The Branch's responsibilities under the Margarine Act were carried out at a similar level of activity as in previous years. Margarine produced and/or sold in the province was sampled and analyzed throughout the year and found to comply fully with compositional requirements. Attempts to market imitation dairy products not permitted under the Dairy Industry Act continued. As well as infringing the Dairy Industry Act, methods used by promoters frequently contravened other regulations, e.g. those of the Health Protection Branch and Consumer and Corporate Affairs. This branch will continue to collaborate with other agencies to regulate the activities of promoters of imitation dairy products.

Extension

Dairy Specialists and the Cheese Specialist worked closely with dairy processors in the implementation of technological changes and in broadening the range of dairy processing in the province. A major extension activity in recent years has been a voluntary Certification Program for dairy plant employees to assist in attaining improved quality through increased education and awareness. Lower turnover of staff in most dairy plants accounts for a reduction in issue of Dairy Plant Worker certificates but awarding of certificates in specialist categories such as Cheesemaker, Plant Sanitarian, and Pasteurizer Operator, has increased.

The licensing of Milk and Cream Graders and Testers and Bulk Tank Milk Graders is a legislative responsibility of this branch. In view of the important role of the Bulk Tank Milk Grader in the collection of samples by which the producer is paid, especially since the introduction of the Milk Grade and Price Program, the branch has increased emphasis on testing, re-testing and inspection of Bulk Tank Milk Graders.

Together with Agriculture Canada and the Alberta Dairymen's Association, the Processing Branch continues to be active in sponsoring and judging dairy product quality competitions. Most competitions are based on monthly samples. Winners are recognized annually at the Dairymen's Convention.

DAIRY FARM INSPECTION BRANCH

Inspection and advisory services were provided to dairymen concerning milk quality, milk production, improvement and upgrading of milking facilities and equipment. The Branch staff used support services of the Dairy Farm Production Branch, Dairy Processing Branch, Animal Industry Division, Animal Health Division and the Food Laboratory to assist in accomplishing their goals.

The Dairy Farm Inspection Branch continued to provide inspection services on behalf of Alberta Agricultural Development Corporation relating to the Dairy Development program.

The Graduated Entry program was interrupted by the declining fluid milk sales experienced during the 1983 calendar year and during 1984 to date. Milk producers who were entitled to their second and third allotments received them as planned. The program, however, received no additional entries. Twenty-one out of the forty milk producers who applied and met milk quality and premise requirements had their names applied to a waiting list.

Substantial gains were made in milk quality during 1983. The Milk Grade and Price Program and more effective utilization of staff contributed to the improvements.

Non-compliance rate of 5.8% was achieved in the fluid milk sector, down from 6.5% a year earlier. Industrial producers non-compliance rate was 5.6%. Of the industrial producers' samples, 85.6% met fluid milk standards compared to 81.3% during 1982.

A concerted effort was made to identify producers who were experiencing mastitis problems as measured by somatic cell counts. There have been a number of interdisciplinary farm calls made respecting these producers. A continued effort in this area can be expected. Fluid producers bulk tank somatic cell count averaged 331,701/mL while industrial producers averaged 458,118/mL.

A total of 104 bulk tanks were levelled to calibration by inspection staff during 1983-84.

Of the 1,689 producers as of March 31, 1984, 1,437 were certified and 252 were industrial. This represents a net loss of 76 producers.

The Milk Grade and Price Program, operating for a twelve month period ending March 31, 1984, recorded 166 Standard Plate Count violations, 66 Freezing Point violations and 110 Inhibitor violations - totalling 342 violations. There were 29 loads of milk destroyed due to inhibitor contamination. Funds collected from producers for grade deductions were allocated to pay for these lost tanker loads to bulk milk graders for the time required to confirm suspicious positive loads, with the remainder being redistributed to milk producers on a monthly basis via the Alberta Dairy Control Board.

During 1983-84, the dairy industry responded to our encouragement to upgrade all industrial producers to certified status. Their field staff worked

closely with Farm Inspection staff in an advisory capacity to producers. The certification process should be complete within two years and will facilitate the movement of milk the shortest possible distance to a plant, thus reducing hauling costs.

The following table summarizes the activities of the Dairy Farm Inspection Branch. Comparisons are based upon April 1 to March 31 year basis.

	1982/83	1983/84
Number of Certified Milk Producers (as of March 31st)	1,462	1,437
Number of Industrial Milk Producers (as of March 31st)	303	252
TOTAL PRODUCERS	1,765	1,689
Inspections of Dairy Farm Premises	4,588	4,871
Non-Inspection Dairy Farm Calls	1,604	777
TOTAL FARM CALLS	5,992	5,648
TOTAL RAW MILK SAMPLES ANALYZED	43,045	46,164
Quality of Milk Samples Analyzed		
Fluid Milk Samples Non-Compliance (75,000/mL S.P.C.)	6.52%	5.80%
Industrial Milk Samples which met Fluid Milk Standards	81.30%	85.60%
Non-Compliance	8.0%	5.6%
Average Leucocyte Counts - Fluid	331,640	331,701
- Industrial	445,472	458,118
Number of Violations - S.P.C.	255	166
- Inhibitors	198	110
- Freezing Point	54	66
TOTAL VIOLATIONS	509	342
Graduated Entrants Approved	0	0

Milk Grade & Price Program commenced on January 1, 1982.

DAIRY FARM PRODUCTION BRANCH

The Dairy Farm Production Branch provided leadership in the development, coordination and delivery of dairy extension programs in 1983.

Major activities included:

(a) Dairy Production Course: Specialists within Alberta Agriculture collaborated in the development of this course. The content ranges from milk marketing and financial management to information on breeding, feeding and milking equipment operation and maintenance.

A looseleaf format facilitates updating and the addition of pages or fact sheets on specific items of current interest. It is anticipated that this course will be used as a basic resource package in dairy extension programs.

(b) Dairy Management Advisory Services: Two dairy management specialists were employed on a temporary basis during the year. Production and financial advisory services were provided directly to approximately 75 dairymen. In most instances discussion also occurred with the lenders concerning alternatives and recommendations provided to individual producers.

The dairy management specialists participated in numerous producer meetings throughout the province presenting information on marketing strategies, record keeping and production efficiency. A computer program was written by one of the specialists to demonstrate alternatives in milk marketing.

(c) Individual Cow Somatic Cell Counting Pilot Project: A total of 62 herds in Alberta participated in the project during the year. A requirement for participation was that the herd was enrolled on a laboratory tested, milk recording program (D.H.I. or R.O.P.).

A survey of those on the program indicated that the information was useful in monitoring the effectiveness of mastitis control procedures in the herd on a monthly basis. The average bulk tank somatic cell count for the herds on the project declined from 286,000 in 1982 to 272,000 in 1983 (approximately 5%). This is compared to a reduction of 2% (from 334,000 to 327,000) in bulk tank somatic cell count levels for all Alberta fluid milk producers during the same period.

Forty-six of the 62 producers on the project were considered to have benefited substantially from participation. The 46 herds reduced average bulk tank somatic cell count levels from 258,000 in 1982 to 211,000 in 1983, a reduction of 18%.

Producers on the project paid $2.00 per cow per year for the monthly individual cow somatic cell counts. This fee closely approximates laboratory operating costs for the service.

(d) Production Plus Clubs: The objective of these clubs is to encourage participating dairymen to increase productivity and efficiency of milk production. A total of 16 clubs, in which approximately 60 producers participated, were active during the year.

Production levels and milk recording data were used to monitor progress. Club members requested information on a wide range of production and marketing topics.

Two Production Plus Clubs were terminated after three years of operation. Evaluation concluded that one half of the participants in the two clubs increased production levels per cow dramatically over the three year period.

(e) Milking Equipment Evaluation and Approval: This is a continuing branch activity. There has been rapid improvement in the design and performance of milking equipment installed on Alberta dairy farms as a result of branch activity in this area.

A total of 72 equipment installations were approved during the year. An additional 221 equipment evaluations were completed by the two milking equipment specialists.

The specialists participated in 23 meetings concerning milking equipment design, installation and maintenance. Farms calls relating to the Somatic Cell Count Pilot Project totalled 87, including follow-up calls to check equipment after updating was completed. Both specialists worked very closely with the dealers and installers in the province. Mechanical failure was identified in new installations of one brand of pumps. This was brought to the attention of the manufacturer and corrective action taken. Problems with sight glass fitted bulk milk tanks were investigated with corrective action being taken by manufacturers and distributors.

The milking equipment specialists and all milking equipment installers in Alberta who weld stainless steel, have voluntarily participated in one of the five day stainless steel welding courses developed in cooperation with the Southern Alberta Institute of Technology, Calgary.

Stray voltage in milking facilities was checked on 28 farms. Sourcing and advice on corrective action was provided with the cooperation of Energy Resources Branch.

(f) Alberta Dairy Producer Newsletter: Alberta milk producers, some cream producers, veterinarians, dairy service and industry personnel received the newsletter on a monthly basis. The publication is used as a major source of information on dairy marketing, production, technology and services for the Alberta dairy industry.

The production specialist, Airdrie, participated in development and delivery of dairy extension programs in southern Alberta. Direct contact with individual producers numbered 192 - most of them farm calls. This provided production advisory services specific to the needs of the dairyman.

A project was developed concerning disposal and utilization of whey in Alberta. The study determined that approximately 120 million kilograms of whey were produced annually in Alberta. Twenty-five per cent of the whey is disposed of through municipal sewer systems and approximately 75% spread on land close to the cheese factory of origin.

The practical aspects of feeding whey to livestock were reviewed. As a livestock feed, approximately fifteen units of whey is equivalent to one unit of barley in digestible nutrients. The economics of feeding whey to livestock related closely to the price of feed grain and the cost of transportation, storage, distribution and maintenance of a whey feeding system.

(g) Branch personnel maintained contacts and involvement in provincial and national affairs relating to dairy technology, research and extension.

Advisory services were provided concerning export of dairy cattle, veal production and marketing, forage quality programs, tours from out of province and interpretation of dairy policy.

DAIRY CATTLE IMPROVEMENT BRANCH

The principle activity of this Branch in 1983 was the Milk Recording Program. Dairy cattle production extension activities in cooperation with other branches and divisions were continued during the year.

The Alberta Milk Producers' Association, acting on behalf of the Alberta Milk Recording Committee, worked closely with government in the development of a proposal for the privatization of the D.H.I. Field Services. An Interim Agreement was signed in February, 1983. A Permanent Agreement was successfully negotiated in August, 1983. This agreement saw the establishment of an Alberta Milk Recording Board with responsibilities for the delivery of the D.H.I. Field Services. Preparations were made by the Board for independent office space, the hiring of a manager and support staff and the transfer of responsibility for D.H.I. Field Services, effective April 1, 1984.

As the proposal for the privatization of D.H.I. Field Services progressed, a close working relationship developed between the branch, the Alberta Milk Recording Committee, the Alberta Milk Producers' Association and the Alberta Milk Recording Board.

To facilitate this privatization process, as wage, temporary salary and permanent positions became vacant throughout the year, new D.H.I. field staff were hired by the Alberta Milk Producers' Association and seconded to the branch for administration.

D.H.I. user fees became the responsibility of the Alberta Milk Recording Board effective January 1, 1984.

Alberta continued to express interest in the joint-venture approach to the development of a new and comprehensive computer management system for milk recording in Canada. A Feasibility Study (Phase I) conducted by Price Waterhouse Management Consultants for Agriculture Canada recommended a computer system rewrite and supported this cooperative approach. The Branch participated throughout the year with other milk recording agencies in Canada in the development of the "Functional Specifications" (Phase II) for the new system. Target date for completion of Phase II by Price Waterhouse is April 1, 1984.

A study to investigate the delivery of milk recording field services in Canada was initiated by Agriculture Canada. Closely related to the privatization of D.H.I. Field Services in Alberta and the cooperative development of a new milk recording computer system for Canada, the investigation examined alternatives to the present R.O.P. and D.H.I. Field Services delivery systems.

Milk Recording

The Alberta Dairy Herd Improvement Program (D.H.I.), a computerized milk recording and management information program, continued to be offered to herd owners throughout the province or an Owner-Sampler (non--supervised basis.) Monthly milk samples were lifted by the herd owners from individual cows and

forwarded to the Central Testing Laboratory in Edmonton for butterfat determination. Samples were transferred to the laboratory by public transport or by D.H.I. Technicians.

The Supervised D.H.I. Program continued to be offered throughout the province on a limited basis. As of December 31st, 1983 there were 7,584 cows in 73 herds enrolled in the Supervised Program for an average number of cows tested per herd of 104.

Herd owners enrolled in D.H.I. were assessed an annual fee for service based on the number of cows that each tested during the year. Fees for the Owner-Sampler Program were $4.00 per cow tested during 1983, and Supervised D.H.I. fees were $12.00 per cow tested, reflecting the higher level of sevice provided in this program. Revenue generated by the program in 1983 was $288,770.05.

D.H.I. Technicians made 9,825 farm calls to pick up milk samples, collect production and management information and provide herd owners with management assistance. The calf identification program was continued under the National Identification Program (NIP) and involved ear-tagging, colour marking and recording the pedigree information on 15,770 heifer calves born to cows enrolled in the milk recording program. NIP is an "upgrading" program coordinated by the Joint Dairy Breeds of Canaa (J.D.B.C.) and for the third consecutive year, more than 85% of the heifer calves NIP identified in Alberta D.H.I. herds met the basic upgrading qualifications. Since its introduction in Alberta on April 1st, 1976, 109,000 cows and heifer calves have been NIP identified by D.H.I. Technicians.

There were 781 herds on test in 1983, an increase of 38 herds over the previous year. A total of 103 new herds with 5,065 cows enrolled in the program, while 77 herd owners with 5,391 cows discontinued the service. The size of herd continued its upward trend to a record high of 82.1 cows tested per herd, an increase of 1.6 cows over 1982. In addition to the 781 herds, 14 herds were direct computer transfer from one owner to another for a total participation for the year of 795 herd owners. More than 1,700 dairymen have enrolled on the program since this computerized management service became available in 1972.

An overall total of 64,168 cows were enrolled in the D.H.I. Milk Recording Program in 1983, resulting in a net increase of 4,324 over the previous year.

The Central Testing Laboratory, O.S. Longman Building, tested a total of 409,555 D.H.I. samples for butterfat from January 1st, 1983 to December 31st, 1983. The Lab also tested 39,603 samples for butterfat and protein in 1983 from herds enrolled on the R.O.P. milk recording program. The transfer of all R.O.P. herds from on-farm testing to laboratory analysis was completed in October, 1983. A Somatic Cell Count pilot project was initiated in April, 1983 with 62 herds participating; the Lab tested an average of 3,200 D.H.I. and R.O.P. individual cow milk samples for somatic cell count levels on a monthly basis.

Summary

D.H.I. herds increased in milk production during the year by 80 kg (176.4 pounds) for an average of 6,148 kg (13,554 pounds) of milk per cow-year; butterfat production increased to 217 kg (478.4 pounds).

TABLE I

ALBERTA D.H.I. SUPERVISED HERDS ONLY

AVERAGE HERD SIZE, BCA'S AND YIELD IN SUPERVISED HERDS: BY BREED

Breed	No. of Herds	Average # Cows Tested	Milk BCA	Fat BCA	Milk Yield	Fat Yield
Holstein	68	106	153	142	7,104 kg (15,661 lbs.)	247 kg (544 lbs.)
Jersey	3	82	162	142	4,816 kg (10,617 lbs.)	224 kg (494 lbs.)
Brown Swiss	1	65	171	171	6,228 kg (13,730 lbs.)	255 kg (562 lbs.)
Guernsey	1	35	167	172	5,986 kg (13,196 lbs.)	291 kg (641 lbs.)
Average of All Breeds	73	104	153	142	7,016 kg (15,467 lbs.)	247 kg (544 lbs.)

Total Cows Tested - 7,584

Date of Source: December 31, 1983

TABLE II

1983 ALBERTA D.H.I. OWNER-SAMPLER HERDS INCLUDING ROP-DHI

AVERAGE HERD SIZE, BCA'S AND YIELDS BY BREED

			-Average of Herds with Established BCA's -			
Breed	Total No. of Herds	Total # Cows Tested	Milk BCA	Fat BCA	Milk Yield	Fat Yield
Holstein	666	54,605	128	121	6,091 kg (13,428 lbs.)	214 kg (472 lbs.)
Jersey	22	1,064	131	111	4,579 kg (10,095 lbs.)	186 kg (410 lbs.)
Brown Swiss	6	205	122	124	4,943 kg (10,897 lbs.)	199 kg (439 lbs.)
Ayrshire	11	692	138	127	5,011 kg (11,047 lbs.)	190 kg (419 lbs.)
Other	3	123	99	88	4,564 kg (10,062 lbs.)	176 kg (388 lbs.)
TOTAL:	708	56,689				
Average of All Breeds:		80	128	121	6,040 kg (13,316 lbs.)	213 kg (470 lbs.)

Date of Source: December 31, 1983

TABLE III

HERDS ON COMPUTERIZED D.H.I. SERVICE BY REGION - 1983

Region	Total Herds	Cows Tested	Herds with Established BCA's* # of Herds	Cows Tested	# Cows With BCA	---BCA--- Milk	Fat	Average Production kg Milk	(lbs.) Fat
1-Lethbridge	96	11,330	82	10,048	7,130	139	129	6,593 (14,635)	229 (505)
2-Calgary	82	6,590	61	5,309	3,587	136	127	6,349 (13,997)	224 (494)
3-Red Deer	268	20,195	229	17,900	13,166	129	123	6,079 (13,402)	217 (478)
4-Vermilion	74	5,613	64	5,074	3,777	127	120	5,924 (13,060)	211 (465)
5-Edmonton	240	18,354	215	16,858	12,342	128	121	6,032 (13,298)	214 (472)
6-Peace River	21	2,086	19	2,045	1,459	144	126	6,532 (14,401)	222 (489)
	781	64,168	670	57,234	41,461	131	123	6,180 (13,625)	218 (481)

*Breed Class Averages and statistics are based only on herds on test over one year where 60% of the cows have completed a lactation.

TABLE IV

MILK RECORDING - 3 YEAR SUMMARY **

	1981	1982	1983
Number of herds under test	721	743	781
Number of cows under test	55,176	59,844	64,154
Average number of cows tested per herd	76.5	80.5	82.1
Number of cow-years	43,362.2	46,837.8	48,646.6
Average number of cow-years per herd	60.1	63.0	62.3
Average BCA milk all breeds	128	131	131
Average production milk - kg	6,044	6,068	6,148
- (lbs.)	(13,324)	(13,377)	(13,554)
Average BCA fat all breeds	120	122	123
Average production butterfat - kg	211	213	217
- (lbs.)	(465.2)	(469.5)	(478.4)
Average test (%)	3.49	3.51	3.52

** Herd averages on the basis of cow years. The total number of cows on test during the year was used in determining the herd average. Where a new cow was placed on test, or a cow was sold or died, only that part of the year in which she produced was used.

Reports and Competitions

Herd owners in the computerized D.H.I. Program receive monthly production-management reports which give them an updated rolling herd average. The average turn around time (the time from farm test to the herd report being printed), was consistently under 7 days. Semi-annual summaries report total production by completed lactations on an individual cow basis; an estimated breeding value is determined for each cow. Certificates of Production are issued to herd owners enrolled in the Supervised D.H.I. Program. Production reports on all D.H.I. herds are forwarded to their respective regional and District Agriculturist's office on a regular basis.

D.H.I. records are used in the National Sire Proving Program. Breed associations received official records of production for all cows completing records in the Supervised D.H.I. Program.

The D.H.I. data base continued to be used as a source of information for research and management related investigations.

D.H.I. workshops and seminars were held throughout the province during the winter months and once again a large number of the D.H.I. herd owners participated.

The D.H.I. computerized program also provides all of the necessary data for scoring the producer competitions which are conducted annually by the Alberta Dairymen's Association in recognition of outstanding achievement.

TABLE III — Milk Production and Utilization

Year	Total Milk Production in Millions of Units	Creamery Butter	Dairy Butter	Cheese	Miscellaneous Factory Products	Milk and Cream Consumed	Farm Fed Animals
		Percentage of Total Milk					
1930	1,077 lb.	38.5	25.8	1.2	.9	25.1	8.5
1935	1,384 lb.	39.1	22.0	1.3	.4	25.6	11.6
1940	1,468 lb.	47.6	20.0	2.1	1.7	21.6	7.0
1945	1,461 lb.	55.6	7.0	3.1	3.1	24.5	6.7
1950	1,375 lb.	53.2	8.1	2.4	4.6	25.6	6.1
1955	1,438 lb.	51.0	4.6	1.7	5.5	32.3	4.9
1960	1,650 lb.	52.9	3.5	1.3	7.2	30.0	5.1
1965	1,641 lb.	52.1	1.6	1.7	8.1	30.7	5.8
1970	1,529 lb.	44.9	1.3	2.8	11.2	33.6	6.2
1973	1,396 lb.	39.0	0.8	5.4	12.8	35.4	6.6
1974	1,284 lb.	34.1	----	6.5	13.5	38.9	7.0
1975	1,276 lb.	37.7	----	7.5	12.0	35.7	7.1
1976 fiscal	1,273 lb.	31.6	----	8.3	12.5	38.4	9.2
1977 fiscal	1,251 lb.	30.7	----	10.3	10.4	41.8	6.8
1978 fiscal	426 hL	27.6	----	11.2	10.6	44.1	6.5
1979 fiscal	450 hL	33.1	----	12.3	11.4	43.2(1)	----
1980 fiscal	480 hL	37.9	----	11.2	10.6	40.3(1)	----
1981 fiscal	528 hL	29.4	----	5.6	9.2	52.8(1)	----
1982 fiscal	585 hL	28.5	----	14.4	11.7	45.4(1)	----
1983 fiscal	560 hL	27.6	----	15.1	11.3	46.0(1)	----

(1) Milk Farm Home Consumed amount usually included in this figure is no longer available.

TABLE IV — Total Value of Dairy Products*

	$ '000		$ '000
1910	7,856	1970	82,849
1915	15,897	1973	104,535
1920	34,000	1974	126,114
1925	23,002	1975	154,739
1930	19,676	1976 fiscal	180,047
1935	14,253	1977 fiscal	200,333
1940	17,324	1978 fiscal	228,457
1945	29,325	1979 fiscal	241,628
1950	42,513	1980 fiscal	322,324
1955	51,942	1981 fiscal	379,877
1960	65,187	1982 fiscal	449,185
1965	69,080	1983 fiscal	480,089

* Total value of all manufactured and processed products including that portion of milk and by-products utilized on farms.

TABLE V

Farm Value of Milk Production

	$ '000		$ '000
1950	33,922	1976 fiscal	129,473
1955	39,713	1977 fiscal	145,220(2)
1960	48,732	1978 fiscal	153,570
1965	51,170	1979 fiscal	159,322(3)
1970	62,883(1)	1980 fiscal	192,459
1973	78,484	1981 fiscal	226,491
1974	101,185	1982 fiscal	246,219
1975	116,826	1983 fiscal	246,721

(1) From 1970 forward, includes Federal Government Subsidy.
(2) From 1977 forward, price is F.O.B. Factory rather than F.O.B. Farm.
(3) Total no longer includes values of Milk Farm Home Consumed and Fed Farm Animals. The comparative 1978 figure excluding these two values is 140,465.

TABLE VI

Value of Factory Dairy Products

Year	Creamery Butter	Cheddar Cheese (1)	Specialty Cheeses	Ice Cream	Fluid Milk and Cream	Skimmilk, Buttermilk and Whey	Miscellaneous Manufactured Products	Total
	Thousands of Dollars							
1945	11,390	982	Nil	1,250	6,231	432	1,166	21,451
1950	16,809	1,113	Nil	2,813	10,094	224	1,764	32,817
1955	18,041	767	Nil	4,346	16,432	520	2,488	42,594
1960	23,265	671	Nil	5,905	19,315	764	4,615	54,535
1965	19,641	882	Nil	6,605	22,028	1,172	7,894	58,222
1970	19,987	1,750	Nil	9,747	28,262	1,636	10,605	71,987
1973	17,550	3,456	Nil	12,474	38,184	2,779	19,092	93,535
1974	16,538	4,820	Nil	14,889	55,177	3,154	20,973	115,551
1975	23,895	7,194	2,406	17,611	61,799	6,180	23,692	142,777
1976(2)	20,921	7,693	3,252	18,461	70,558	14,484	24,304	159,673
1977	23,799	9,604	4,557	18,796	79,940	17,088	26,784	180,568
1978	21,049	11,063	6,708	20,107	104,867	17,029	28,275	209,098
1979	23,821	11,056	9,111	19,996	125,317	21,026	31,301	241,628
1980	27,992	15,135	12,194	31,587	181,958	12,927	40,531	322,324
1981	35,435	18,369	14,576	34,563	200,140	17,614	59,180	379,877
1982	40,358	24,259	18,554	38,360	213,353	25,644	88,657	449,185
1983	40,014	26,487	21,820	48,499	217,713	29,254	96,302	480,089

(1) Factory Cheese value includes net increase in processing.
(2) Fiscal year from 1976 forward.

TABLE VII — The Production and Value of Ice Cream

Year	Production '000	Price	Value $ '000
1935	375 gal	$ 1.20/gal	452
1940	743 gal	1.09/gal	810
1945	1,042 gal	1.20/gal	1,250
1950	1,967 gal	1.43/gal	2,813
1955	2,716 gal	1.60/gal	4,346
1960	3,623 gal	1.63/gal	5,905
1965	5,242 gal	1.26/gal	6,605
1970	5,634 gal	1.73/gal	9,747
1973	6,332 gal	1.97/gal	12,474
1974	6,588 gal	2.26/gal	14,889
1975	6,671 gal	2.64/gal	17,611
1976 fiscal	6,713 gal	2.75/gal	18,461
1977 fiscal	6,835 gal	2.75/gal	18,796
1978 fiscal	31,859 L	0.631/L	20,107
1979 fiscal	30,343 L	0.659/L	19,996
1980 fiscal	31,906 L	0.990/L	31,587
1981 fiscal	27,873 L	1.240/L	34,563
1982 fiscal	27,797 L	1.380/L	38,360
1983 fiscal	30,891 L	1.570/L	48,499

TABLE VIII — The Production and Value of Creamery Butter

Year	Creameries	Production '000	Av. Output Per Creamery '000	Selling Value Total $ '000	Selling Value Cents
1920	53	11,821 lb.	223 lb.	6,556	55.45/lb
1925	99	19,630 lb.	198 lb.	6,959	35.45/lb
1930	92	17,717 lb.	192 lb.	4,968	28.04/lb
1935	97	23,095 lb.	238 lb.	4,589	19.90/lb
1940	95	29,797 lb.	314 lb.	6,651	22.32/lb
1945	91	34,693 lb.	381 lb.	11,390	32.83/lb
1950	92	31,238 lb.	340 lb.	16,809	53.81/lb
1955	89	31,326 lb.	352 lb.	18,041	57.59/lb
1960	86	37,338 lb.	434 lb.	23,265	62.31/lb
1965	80	36,562 lb.	457 lb.	19,641	53.72/lb
1970	56	29,311 lb.	523 lb.	19,987	68.19/lb
1973	46	23,282 lb.	506 lb.	17,550	75.38/lb
1974	33	18,695 lb.	567 lb.	16,538	88.46/lb
1975	31	20,587 lb.	664 lb.	23,895	116.07/lb
1976 fiscal	22	17,843 lb.	811 lb.	20,921	117.25/lb
1977 fiscal	20	18,342 lb.	917 lb.	23,799	129.75/lb
1978 fiscal	19	6,946 kg	366 kg	21,049	303.03/kg
1979 fiscal	17	7,117 kg	419 kg	23,821	334.71/kg
1980 fiscal	16	7,863 kg	491 kg	27,992	356.00/kg
1981 fiscal	13	8,260 kg	635 kg	35,435	429.00/kg
1982 fiscal	13	8,475 kg	652 kg	40,358	476.20/kg
1983 fiscal	13	7,800 kg	600 kg	40,014	513.00/kg

TABLE IX The Production and Value of Cheddar and Variety Cheeses

Year	Factories C	Factories V	Production '000 C	Production '000 V	Av. Output Per Factory '000 C	Av. Output Per Factory '000 V	Selling Value Total $ '000 C	Selling Value Total $ '000 V	Selling Value Cents C	Selling Value Cents V
1920	7		399 lb		57 lb		110		27.70 /lb.	
1925	14		1,474 lb		105 lb		307		20.80 /lb.	
1930	8		1,035 lb		129 lb		175		16.94 /lb.	
1935	11		1,365 lb		124 lb		168		12.33 /lb.	
1940	18		2,706 lb		150 lb		386		14.25 /lb.	
1945	18		3,985 lb		221 lb		903		22.67 /lb.	
1950	14		2,940 lb		210 lb		1,030		35.05 /lb.	
1955	10		2,151 lb		215 lb		694		32.25 /lb.	
1960	7		1,760 lb		261 lb		671		39.55 /lb.	
1965	6		2,188 lb		365 lb		882		40.31 /lb.	
1970	6	3	3,357	155 lb	560	52 lb	1,750	---	52.13	--- /lb.
1973	7	4	4,768	913 lb	681	228 lb	3,456	---	72.48	--- /lb.
1974	6	6	4,884	2,186 lb	814	365 lb	4,820	---	98.69	--- /lb.
1975	7	6	6,307	2,406 lb	901	401 lb	7,914	2,296	113.35	95.43/lb.
1976*	7	6	6,872	3,161 lb	982	510 lb	7,693	3,193	111.95	101.02/lb.
1977	6	6	8,013	4,557 lb	1,335	759 lb	9,604	5,462	119.86	119.86/lb.
1978	6	8	3,935	2,386 kg	656	298 kg	11,063	6,708	281.14	281.14/kg
1979	6	11	3,649	3,007 kg	608	273 kg	11,056	9,111	302.99	302.99/kg
1980	6	11	3,921	3,159 kg	654	287 kg	15,135	12,194	308.60	308.60/kg
1981	6	11	3,599	3,321 kg	600	302 kg	18,369	14,563	510.40	438.52/kg
1982	6	10	4,023	3,651 kg	671	365 kg	24,259	18,554	603.00	508.18/kg
1983	6	10	4,160	3,533 kg	693	353 kg	26,487	21,820	636.71	617.61/kg

*Fiscal year from 1976 forward.

TABLE X Butterfat Received as Cream on a Monthly Basis

	1978	1979	1980	1981	1982	1983
	Percentage Change from Previous Year					
April	-15.7	-12.1	-11.96	-18.00	- 4.35	-27.31
May	-18.4	- 6.9	- 9.24	-23.16	-12.55	-17.15
June	-13.4	-29.4	-14.32	-11.30	-15.20	-25.08
July	-15.3	- 8.8	-12.57	-17.58	-14.20	-35.69
August	-15.4	-24.6	-18.23	-19.45	- 4.39	-16.09
September	-14.9	-16.0	- 4.64	-19.85	- 7.71	-17.21
October	-11.7	- 6.9	-16.15	-16.93	-10.16	-21.48
November	-14.2	-27.4	-24.48	- 4.93	- 6.75	-22.29
December	- 8.1	-24.0	- 9.91	- 6.81	-16.47	-15.38
January	- 9.9	-16.5	-19.14	- 9.81	-13.09	-11.72
February	-13.9	-19.9	-19.47	- 9.43	-15.76	-11.37
March	-11.2	-31.3	-11.14	- 6.17	-18.63	-12.39
Total Year	-14.5	-18.9	-13.86	-15.11	-11.37	-20.84

TABLE XI Milk Cow Numbers and Average Production

Year	No. Cows June 1st	Average Milk	Production Butterfat
1930	351,600	3,118 lb.	112.2 lb.
1935	453,800	3,125 lb.	112.5 lb.
1940	370,600	3,960 lb.	142.6 lb.
1945	344,000	4,247 lb.	152.9 lb.
1950	297,800	4,617 lb.	166.2 lb.
1955	285,000	5,044 lb.	176.5 lb.*
1960	279,000	5,915 lb.	207.0 lb.
1965	262,000	6,264 lb.	219.2 lb.
1970	198,000	7,721 lb.	270.2 lb.
1973	169,000	8,265 lb.	289.3 lb.
1974	169,000	7,595 lb.	265.8 lb.
1975	170,000	7,507 lb.	262.7 lb.
1976	152,000	8,376 lb.	293.2 lb.
1977	155,000	8,072 lb.	282.5 lb.
1978	148,000	2,878 L	103.6 kg
1979	135,000	3,333 L	119.9 kg
1980	138,000	3,478 L	125.2 kg
1981	142,000**	3,718 L	133.8 kg
1982	158,000**	3,450 L	124.2 kg
1983	157,000**	3,565 L	128.3 kg

* From 1955 forward, average buterfat test 3.5%; previous years was 3.6%.
** Census figure as of January 1 of that year.

Alberta Margarine Statistics as reported by Bureau of Statistics, Alberta Department of Industry & Commerce, are no longer available.

ALBERTA DAIRY CONTROL BOARD

BOARD MEMBERS

J. R. Gylander (Chairman)
April 1, 1983 - December 1983 ------ Wetaskiwin

M. Dordevic (Chairman)
January 1984 - March 1984 ------ Wetaskiwin

J. M. Bentley (Member) ------ Edmonton

A. Kastelic (Member) ------ Sangudo

L. Henderson (Member) ------ Lacombe

Mrs. J. Chorny (Member) ------ Calgary

M. Dordevic (Secretary-Manager) ------ Wetaskiwin

BOARD INSPECTORS

B. A. Allen - Calgary area

W. Vonk - Edmonton area

D. G. Thompson - Lethbridge area

The Dairy Board, operating under the Dairy Board Act, met its responsibilities in administration of fluid, industrial milk and cream sectors. These responsibilities included the licensing of dairy producers, processors and distributors of fluid products; setting and adjusting fluid milk quotas; regulating time and payment to producers; and, in general, governing the sale of milk in Alberta.

The Board is responsible for the operation of the ALBERTA MILK MARKET SHARING plan which is an industrial milk plan entered into by Federal and Provincial authorities. The Board is a member of the Canadian Milk Supply Management Committee, a body responsible for the development of the national dairy policy.

The number of active dairy producers - fluid milk, industrial milk and cream (as of March 31, 1984) totalled 3,118. The total provincial dairy production was down by 3.73% from the previous fiscal year. Fluid milk production decreased by 1.86% whereas industrial production of milk and cream decreased by 8.73% and 20.82% respectively. Fluid milk sales decreased by 3.0% from the previous year, due primarily to the declining population in Alberta.

The 1982-83 dairy year, August 1st to July 31st, was a difficult year in that the supply management system was tested by severe over-production by some producers, under-production by others and production meeting assigned quotas by others. On a provincial basis, Alberta's producers produced 100.73% of the provincial MSQ allocation. The year was fraught with declining fluid sales and increasing total provincial production especially in the first portion of the year, thus causing some producers to make major production adjustments during the final months of the dairy year.

The Board operated a fluid milk equalization pool for Alberta fluid milk producers. This plan successfully completed its ninth year of operation and enabled producers to share in the sales of fluid milk returns, regardless of location or source of sales.

The graduated entry plan accepted no further producers into the fluid milk sector. There were 122 producers who received additional allotments of fluid quota under the graduated entry plan. A total of 930 producers have entered the fluid sector since the start of the graduated entry program in 1975.

Producers' financial returns for fluid milk, industrial milk and farm separated cream advanced at intervals during the year. Fluid milk prices increased $0.98 per hectolitre on September 1, 1983 ending the fiscal year at $47.15 per hectolitre. Industrial milk prices (per hectolitre) advanced $0.26 on April 1, 1983, $1.14 on August 1, 1983 and $0.38 on January 1, 1984 ending the fiscal year at $36.38 per hectolitre. Churning cream prices were also increased on April 1, 1983, August 1, 1983 and January 1, 1984 resulting in total increases of $0.42 per kilogram of butterfat.

Board staff maintained an audit program of all fluid processors together with inspections to maintain and ensure compliance with regulations issued under the authority of the Alberta Dairy Board Act.

TABLE 1

NUMBER OF MILK PRODUCERS, PROCESSORS AND DISTRIBUTORS AT MARCH 31, 1984, 1983, 1982

	1984 Production (Fluid)	1984 Processors/ Distributors	1983 Producers	1983 Distributors	1982 Producers	1982 Distributors
Calgary	557	3	568	3	547	3
Camrose	66	1	65	1	65	1
Crowsnest Pass	11	1	11	1	12	1
Edmonton	445	3	448	3	434	3
Lethbridge	51	2	41	2	44	2
Medicine Hat	-	2	11	2	11	2
Red Deer	-	3	-	3	-	3
Other Areas	279	6	314	5	328	5
Total	1,409	21	1,458	20	1,441	20

Note 1: 1983 Average dairy shipment per producer was 960 litres.

Note 2: The above 1,409 fluid producers includes those delivering milk to plants processing other dairy products.

TABLE 2

FLUID MILK CONSUMPTION IN LITRES 1978/79 - 1983/84 (April 1 - March 31)

AREAS	1983/84	1982/83	1981/82	1980/81	1979/80	1978/79
Southern	22,876,864	21,995,564	20,021,274	19,217,134	18,859.270	17,735,481
Calgary *	100,049,764	105,848,724	106,087,722	105,995,094	102,954,491	94,951,404
North	130,858,278	134,325,889	136,328,882	130,717,693	121,907,598	110,538,559
Total	253,784,906	262,170,177	262,437,878	255,929,921	243,721,359	223,225,444

* Includes Central Area

TABLE 3

FLUID CREAM CONSUMPTION IN LITRES, APRIL 2 - MARCH 31, 1978/79 - 1983/84

AREAS	1983/84	1982/83	1981/82	1980/81	1979/80	1978/79
Southern	590,410	554,631	489,579	470,147	455,063	473,545
Calgary *	3,745,535	3,895,806	3,870,624	3,635,847	3,396,215	2,972,942
North	4,428,416	4,339,155	4,424,338	4,190,705	3,830,222	3,656,463
Total	8,764,362	8,789,592	8,784,541	8,296,699	7,681,500	7,102,948

* Includes Central Area

TABLE 4

MONTHLY SALES OF FLUID MILK APRIL 1983 TO MARCH 1984 IN LITRES

HOMO, 2%,SKIM, CHOCOLATE, BUTTERMILK AND EGG NOG

AREAS	April	May	June	July	August	September	October	November	December	January	February	March
South	1,828,645	1,920,348	1,870,565	1,793,775	1,878,263	2,019,843	1,962,632	1,915,004	2,006,011	1,940,366	1,742,728	1,998,684
Calgary	7,950,399	8,451,716	8,292,205	7,764,163	8,020,789	8,685,667	8,248,507	8,464,911	8,951,171	8,647,133	7,773,837	8,799,266
North	10,490,184	11,078,806	10,834,200	9,724,643	10,252,804	11,379,763	11,054,289	11,062,649	11,672,496	11,334,817	10,416,696	11,556,931
Total	20,269,228	21,450,870	20,996,970	19,282,581	20,151,856	22,085,273	21,265,428	21,442,564	22,629,678	21,922,316	19,933,261	22,354,881
Cumulative	20,269,228	41,720,098	62,717,068	81,999,649	102,151,505	124,236,778	145,502,206	166,944,770	189,574,448	211,496,764	231,430,025	253,784,906

TABLE 5

MONTHLY SALES OF HOMO MILK APRIL 1983 TO MARCH 1984, IN LITRES

AREAS	April	May	June	July	August	September	October	November	December	January	February	March
South	488,764	519,091	507,633	511,986	505,544	540,843	520,846	500,564	516,599	498,529	447,783	507,424
Calgary	2,062,360	2,196,572	2,167,842	2,036,804	2,124,586	2,238,950	2,092,252	2,109,002	2,174,607	2,169,679	1,928,991	2,156,692
North	2,933,184	3,146,996	3,122,438	2,850,108	3,017,620	3,235,128	3,126,169	3,107,698	3,267,283	3,223,791	2,918,895	3,202,100
Total	5,484,308	5,862,659	5,797,913	5,398,898	5,647,750	6,014,921	5,739,267	5,717,264	5,958,489	5,891,999	5,295,669	5,866,216
Cumulative	5,484,308	11,346,967	17,144,880	22,543,778	28,191,528	34,206,449	39,945,716	45,662,980	51,621,469	57,513,468	62,809,137	68,675,353

TABLE 6

MONTHLY SALES OF 2% PARTLY SKIMMED MILK APRIL 1983

TO MARCH 1984 IN LITRES

AREAS	April	May	June	July	August	September	October	November	December	January	February	March
South	1,182,995	1,226,498	1,191,539	1,114,812	1,193,216	1,292,738	1,259,648	1,231,334	1,277,565	1,270,195	1,133,762	1,303,922
Calgary	5,062,252	5,349,603	5,230,448	4,894,703	4,967,125	5,490,304	5,279,698	5,370,530	5,517,174	5,560,585	4,981,586	5,663,214
North	6,619,378	6,924,456	6,720,704	5,980,593	6,282,014	7,071,344	6,880,364	6,836,103	7,043,099	7,052,329	6,448,230	7,197,733
Total	12,864,625	13,500,557	13,142,691	11,990,108	12,442,355	13,854,386	13,419,710	13,437,967	13,837,838	13,883,109	12,563,578	14,164,869
Cumulative	12,864,625	26,365,182	39,507,873	51,497,981	63,940,336	77,794,722	91,214,432	104,652,399	118,490,237	132,373,346	144,936,924	159,101,793

TABLE 7

MONTHLY SALES OF SKIM MILK APRIL 1983 - MARCH 1984 IN LITRES

AREAS	April	May	June	July	August	September	October	November	December	January	February	March
South	58,506	64,063	61,007	54,919	57,837	64,797	63,416	62,863	59,167	66,927	63,076	75,719
Calgary	329,184	420,069	412,459	356,315	430,047	423,309	398,482	419,717	401,219	451,835	426,146	496,718
North	428,778	453,977	446,332	376,490	401,426	463,373	459,813	461,601	442,713	489,828	484,467	556,286
Total	879,468	938,109	919,798	787,724	889,310	951,479	921,711	944,181	903,099	1,008,590	973,689	1,128,723
Cumulative	879,468	1,817,577	2,737,375	3,525,099	4,414,409	5,365,888	6,287,599	7,231,780	8,134,879	9,143,469	10,117,158	11,245,881

TABLE 8

MONTHLY SALES OF CHOCOLATE MILK APRIL 1983 - MARCH 1984 IN LITRES

AREAS	April	May	June	July	August	September	October	November	December	January	February	March
South	84,630	93,699	92,907	95,432	102,412	105,232	104,717	97,000	83,751	91,594	85,614	96,254
Calgary	375,593	418,901	412,789	405,985	427,504	467,913	412,001	412,931	359,934	416,439	382,403	419,776
North	420,545	457,740	442,822	423,110	446,352	514,713	481,368	483,185	421,696	486,470	480,027	504,970
Total	880,768	970,340	948,518	924,527	976,268	1,087,858	998,086	993,116	865,381	994,503	948,044	1,021,000
Cumulative	880,768	1,851,108	2,799,626	3,724,153	4,700,421	5,788,279	6,786,365	7,779,481	8,644,862	9,639,365	10,587,409	11,608,409

TABLE 9

MONTHLY SALES OF BUTTERMILK APRIL 1983 - MARCH 1984 IN LITRES

AREAS	April	May	June	July	August	September	October	November	December	January	February	March
South	13,750	16,997	17,479	16,626	19,254	16,233	14,005	12,866	12,382	12,653	12,493	15,365
Calgary	58,890	66,368	68,587	70,095	71,383	64,266	54,605	57,370	53,522	53,615	54,460	62,426
North	88,515	95,637	101,904	94,342	105,392	94,533	87,705	87,618	81,969	82,898	84,798	95,818
Total	161,155	179,002	187,970	181,063	196,029	175,032	156,315	157,854	147,873	149,166	151,751	173,609
Cumulative	161,155	340,157	528,127	709,190	905,219	1,080,251	1,236,566	1,394,420	1,542,293	1,691,459	1,843,210	2,016,819

TABLE 10

MONTHLY SALES OF FLUID CREAM APRIL 1983 - MARCH 1984 IN LITRES

AREAS	April	May	June	July	August	September	October	November	December	January	February	March
South	45,520	49,491	47,019	49,174	50,486	50,739	52,138	48,428	56,092	45,518	43,558	52,246
Calgary	289,002	329,997	318,743	308,286	315,957	332,039	293,297	309,254	368,912	285,470	278,413	320,166
North	326,466	373,761	367,517	349,081	372,156	384,399	384,972	365,971	448,591	345,837	329,200	380,465
Total	660,988	753,249	733,279	706,541	738,599	767,177	730,407	723,653	873,595	676,825	651,171	752,877
Cumulative	660,988	1,414,237	2,147,516	2,854,057	3,592,656	4,359,833	5,090,240	5,813,893	6,687,488	7,364,313	8,015,484	8,768,361

TABLE 11

FLUID MILK PURCHASES BY DISTRIBUTION PLANTS 1979/80, 1980/81, 1981/82, 1982/83 1983/84 IN LITRES

AREAS	1983/84	1982/83	1981/82	1980/81	1979/80
Southern	36,968,457	38,506,898	38,019,241	31,968,375	28,632,235
* Calgary	211,162,510	209,729,150	187,415,273	176,354,297	155,706,728
Edmonton	154,078,947	154,161,350	149,379,649	124,554,877	117,279,628
TOTAL CONTROLLED AREAS	402,209,914	402,397,398	374,814,163	332,877,549	301,618,591
** OTHER AREAS	19,558,446	22,607,713	26,144,328	26,723,136	27,140,099
TOTAL ALL AREAS	421,768,360	425,005,111	400,958,491	359,600,685	328,758,690

* Includes Central Area

** Other areas do not include 71,966,250 litres of milk purchased by 8 cheese plants and powder plants with graduated entrants.

TABLE 12

TOTAL SALES OF MILK AND CREAM IN LITRES BY SIZE OF CONTAINERS APRIL 1983 TO MARCH 1984

	Fluid Milk Products	% of Total	Cream	% of Total	Total all Products	% of Total
20 litres	13,174,700	5.19	213,600	2.44	13,388,300	5.10
4 litres	27,577,449	10.87			27,577,449	10.50
2 litres	173,532,424	68.38			173,532,424	66.10
1 litre	26,330,875	10.37	1,925,262	21.96	28,256,137	10.76
500 ml	3,731,309	1.47	2,652,989	30.26	6,384,298	2.43
250 ml	8,301,498	3.27	1,419,100	16.18	9,720,598	3.70
Creamer			2,557,410	29.16	2,557,410	0.98
Egg Nog	1,136,651	.45			1,136,651	0.43
TOTAL LITRES	253,784,906	100.00	8,768,361	100.00	262,553,267	100.00

TABLE 13

TOTAL FLUID SALES APRIL 1983 - MARCH 1984/BY PRODUCTS IN LITRES

	HOMO	2%	SKIM	TOTAL	CHOCOLATE	BUTTERMILK	EGG NOG	TOTAL	CREAM	TOTAL
SOUTHERN	6,065,606	14,678,224	752,297	21,496,127	1,133,242	180,103	67,392	1,380,737	590,410	23,467,174
CALGARY	25,458,337	63,367,222	5,028,500	93,854,059	4,912,169	735,587	547,949	6,195,705	3,745,536	103,795,300
EDMONTON	37,151,410	81,056,347	5,465,084	123,672,841	5,562,998	1,101,129	521,310	7,185,437	4,428,416	135,286,694
TOTAL	68,675,353	159,101,793	11,245,881	239,023,027	11,608,409	2,016,819	1,136,651	14,761,879	8,764,362	262,549,268

TABLE 14

MILK AND CREAM PRODUCTION BY SECTORS EXPRESSED IN KILOGRAMS OF BUTTERFAT OR EQUIVALENT

Fiscal Year - April - March

SECTOR	1983/84	1982/83	1981/82	1980/81	1979/80
* Fluid Milk	17,778,716	18,114,705	17,300,924	15,238,324	13,663,014
Industrial Milk	1,495,613	1,638,581	1,705,293	2,054,940	2,536,607
TOTAL MILK	19,274,329	19,753,286	19,006,217	17,293,264	16,199,621
INDUSTRIAL CREAM	1,193,019	1,506,802	1,700,167	2,002,980	2,324,965
TOTAL PRODUCTION	20,467,348	21,260,088	20,706,384	19,296,244	18,524,586
Per cent Change	- 3.77	+ 2.67	+ 7.31	+ 4.17	+ 2.09

* (Converted to Butterfat using 3.60 kilograms of B.F. to one hectolitre)

TABLE 15

GRADUATED ENTRY PLAN - STATISTICS

	1983	1982	1981	1980	1979	1978
Applications Received	40	106	317	208	289	190
Applications Accepted	0	42	181	143	223	142
Initial Allotment - Litres	0	7,245	30,985	25,230	37,765	23,760
2nd year daily allotment - Litres	3,865	15,030	12,155	18,880	11,880	6,410
3rd year daily allotment - Litres	14,250	12,290	18,880	11,880	6,410	4,160
TOTAL LITRES (By year)	18,115	34,565	62,020	55,990	56,055	34,330
Total Applications Accepted to Date	930					
Total Litres to Date	309,085					